

METHOD AND APPARATUS USING PSEUDO-INVERSES OF LINEAR TRANSFORMATIONS IN MULTI-CARRIER MODULATION RECEIVERS AND TRANSCEIVERS

Abstract

5 Many communications protocols involve a collection of communication channels collectively forming the dimensions of a finite dimensional vector space, of which at any point in time, only a subset of those channels or dimensions must be received. Messages on these channels are time progressions in at least the actively used dimensions of the vector space
10 which have been linearly transformed to create a sample list transported across at least one physical transport layer to a receiver. The linear transform may further include an estimation of the effects of the transport of the sample list across the one or more physical layers to the receiver. This invention uses at least portions of pseudo-inverses of the linear transform in various ways
15 within receivers and receiver portions of transceivers.